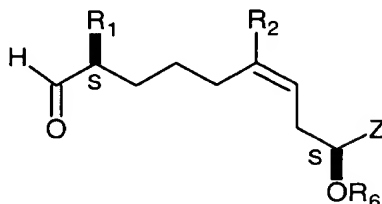


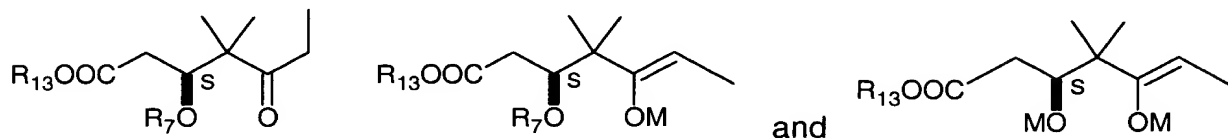
In the claims:

1. (Currently Amended) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

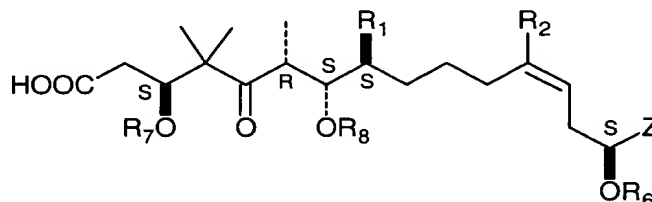
(a) performing an aldol condensation of a first compound ~~selected from the formulas:~~ of the formula:



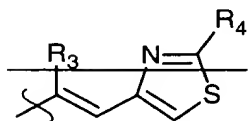
and stereoisomers thereof, with a second compound selected from the formulas:



and stereoisomers thereof, thereby to form a third compound ~~selected from the formulas:~~ of the formula:

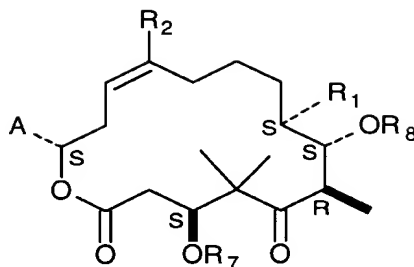


and stereoisomers thereof, wherein Z is ~~selected from~~  and

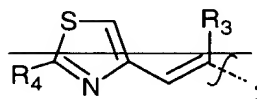


; wherein R₁, R₂, and R₃ ~~and R₄~~ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; wherein R₅, R₆, R₇ and R₈ are each selected from H and a protecting group; wherein R₁₃ is H or a metal salt; and wherein M is an alkali metal salt or transition metal salt; and

(b) performing a macrolactonization of the third compound thereby to form a fourth compound ~~selected from the formulas:~~ of the formula:



and stereoisomers thereof, wherein A is selected from  and



; wherein R₁, R₂, and R₃ and R₄ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; and wherein R₅, R₇ and R₈ are each selected from H and a protecting group.

2. (Currently Amended) A method according to claim 1 wherein R₁, and R₃ and R₄ are each methyl, and R₂ is H or methyl.

3. Cancelled.

4. (Original) A method according to claim 2 wherein R₂ is methyl.

5. (Original) A method according to claim 2 wherein at least one of R₅ - R₈ is TBS.

6. (Original) A method according to claim 2 wherein R₆, R₇ and R₈ are each TBS.

7. (Original) A method according to claim 2 wherein R₅ is PMB.

8. Cancelled.

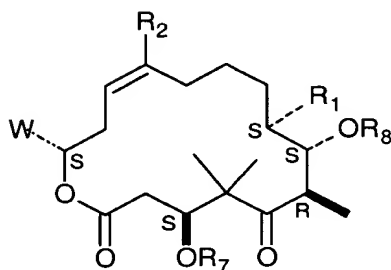
9. (Original) A method according to claim 1 wherein R₅ is selected from PMB, DPS and TBS; wherein R₆ is selected from H, TBS, TMS, TIPS, PMBM and SEM; wherein R₇ is selected from H, TBS, TROC, -CO(CH₂)₄CH₃ and -CO(CH₂)₃CH=CH₂; and wherein R₈ is selected from H and TBS.

10. – 32. Cancelled.

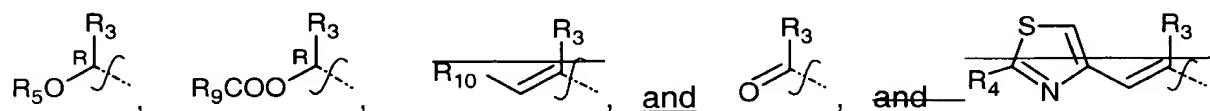
33. (Original) A chemical compound formed according to the method of claim 1.

34. – 68. Cancelled.

69. (Currently Amended) A chemical compound ~~having a formula selected from:~~ of the formula:



and stereoisomers thereof, wherein W is selected from



wherein R_1 , R_2 , and R_3 ~~and R_4~~ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; wherein R_5 , ~~R_6 , R_7 and R_8~~ are each is selected from H and a protecting group; wherein R_7 is selected from H, a protecting group and COR_{11} ; wherein R_8 is selected from H, a protecting group and COR_{12} ; wherein R_9 is selected from alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; ~~wherein R_{10} is selected from alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof;~~ and wherein R_{11} and R_{12} are each selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

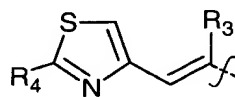
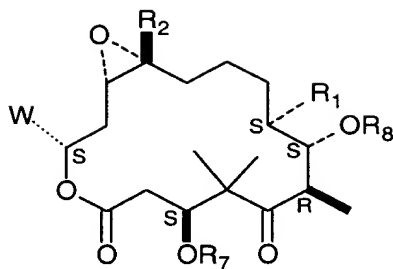
70. (Original) A chemical compound according to claim 69 wherein at least one of R_{11} and R_{12} is selected from $-(CH_2)_xCH_3$ and $-(CH_2)_yCH=CH_2$, where x and y are integers.

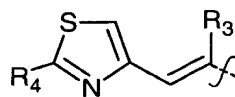
71. (Previously Amended) A chemical compound according to claim 70 wherein x and y are selected from the integers 3 and 4.

72. (Original) A chemical compound according to claim 70 wherein x is 4 and y is 3.

73. and 74. Cancelled.

75. (Withdrawn) A chemical compound having a formula



and stereoisomers thereof, wherein W is ; wherein R₁, R₂, R₃ and R₄ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; wherein R₇ is selected from H, a protecting group, and COR₁₁; wherein R₈ is selected from H, a protecting group, and COR₁₂, and wherein R₁₁ and R₁₂ are each selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

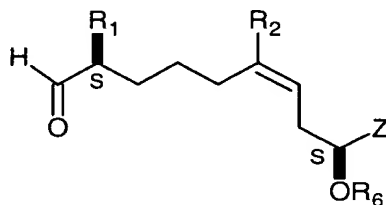
76. (Withdrawn) A chemical compound according to claim 75 wherein at least one of R₁₁ and R₁₂ is selected from $-(CH_2)_xCH_3$ and $-(CH_2)_yCH=CH_2$, where x and y are integers.

77. (Withdrawn) A chemical compound according to claim 76 wherein x and y are selected from the integers 3 and 4.

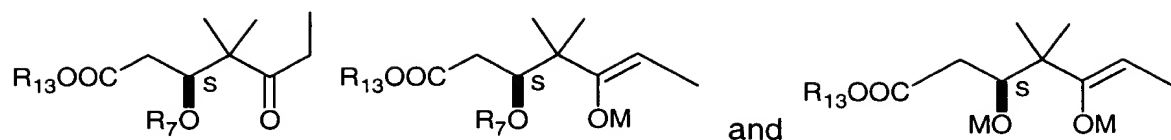
78. (Withdrawn) A chemical compound according to claim 76 wherein x is 4 and y is 3.

79. (New) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

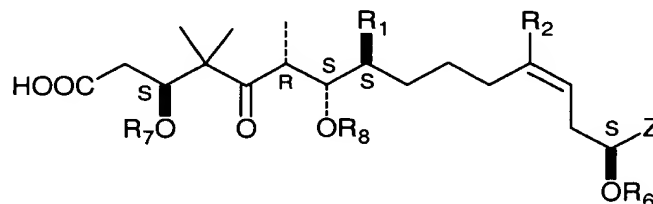
(a) performing an aldol condensation of a first compound of the formula:

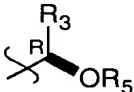


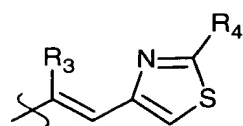
and stereoisomers thereof, with a second compound selected from the formulas:



and stereoisomers thereof, thereby to form a third compound of the formula:

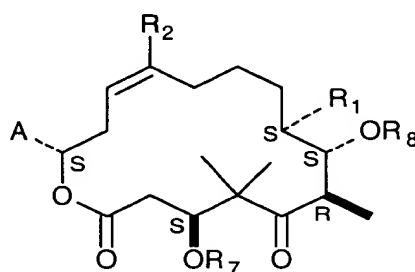


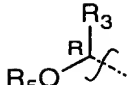
and stereoisomers thereof, wherein Z is selected from  and

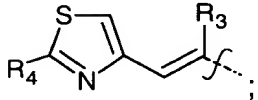


; wherein R₁, R₃ and R₄ are each, methyl; wherein R₂ is H; wherein R₅, R₆, R₇ and R₈ are each selected from H and a protecting group; wherein R₁₃ is H or a metal salt; and wherein M is an alkali metal salt or transition metal salt; and

(b) performing a macrolactonization of the third compound thereby to form a fourth compound of the formula:

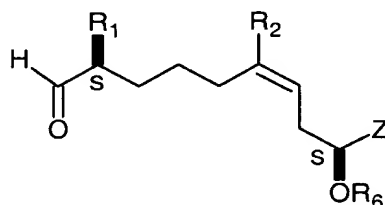


and stereoisomers thereof, wherein A is selected from  and

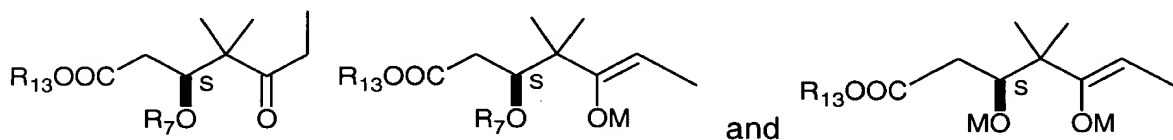
; wherein R₁, R₃ and R₄ are each methyl; wherein R₂ is H; and wherein R₅, R₇ and R₈ are each selected from H and a protecting group.

80. (New) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

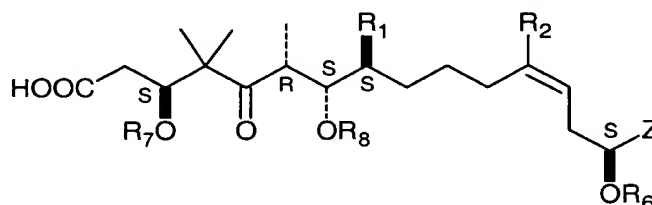
(a) performing an aldol condensation of a first compound of the formula:

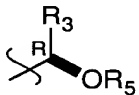


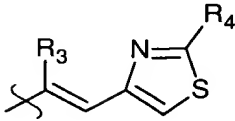
and stereoisomers thereof, with a second compound selected from the formulas:



and stereoisomers thereof, thereby to form a third compound of the formula:

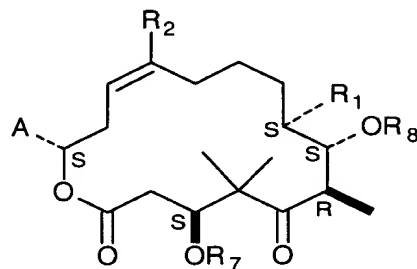


and stereoisomers thereof, wherein Z is selected from  and

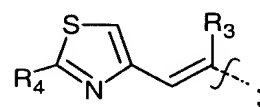
; wherein R₁, R₃ and R₄ are each methyl; wherein R₂ is H or methyl; wherein R₅, R₇ and R₈ are each selected from H and a protecting group; wherein R₆

is SEM; wherein R_{13} is H or a metal salt; and wherein M is an alkali metal salt or transition metal salt; and

(b) performing a macrolactonization of the third compound thereby to form a fourth compound of the formula:



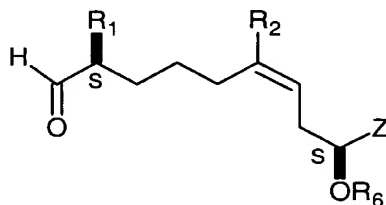
and stereoisomers thereof, wherein A is selected from $R_5O-C(R_3)-$ and



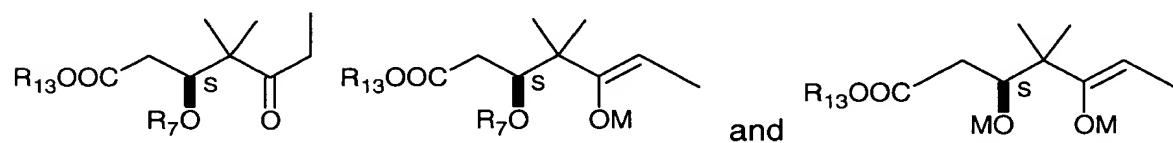
; wherein R_1 , R_3 and R_4 are each methyl; wherein R_2 is H or methyl; and wherein R_5 , R_7 and R_8 are each selected from H and a protecting group.

81. (New) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

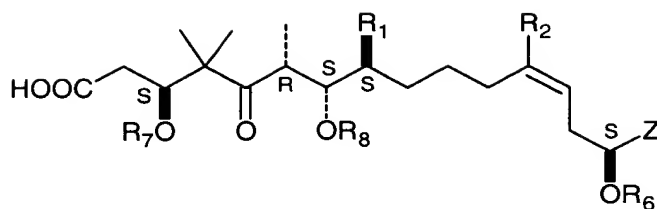
(a) performing an aldol condensation of a first compound of the formula:

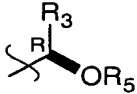


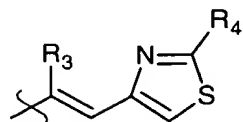
and stereoisomers thereof, with a second compound selected from the formulas:



and stereoisomers thereof, thereby to form a third compound of the formula:

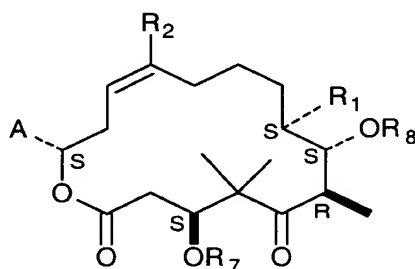



and stereoisomers thereof, wherein Z is selected from  and



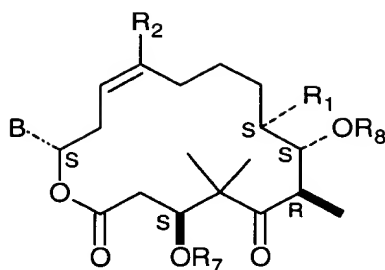
; wherein R₁, R₂, R₃ and R₄ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; wherein R₅, R₆, R₇ and R₈ are each selected from H and a protecting group; wherein R₁₃ is H or a metal salt; and wherein M is an alkali metal salt or transition metal salt;

(b) performing a macrolactonization of the third compound thereby to form a fourth compound of the formula:



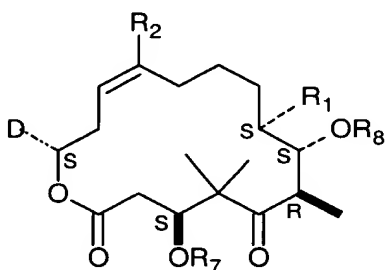
and stereoisomers thereof, wherein A is ; R₂ is H or methyl; R₃ is methyl; R₇ and R₈ are each selected from TBS, H, and a protecting group; and

(c) converting said fourth compound to a fifth compound of the formula:



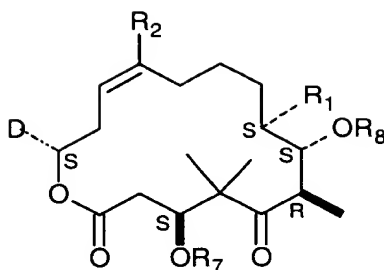
and stereoisomers thereof, wherein B is $\text{HO}-\text{C}(\text{R})(\text{R}_3)$; R_2 is H or methyl; R_3 is methyl; and R_7 and R_8 are each selected from TBS, H, and a protecting group.

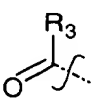
82. (New) A method according to claim 81 wherein said fifth compound is converted to a sixth compound of the formula:



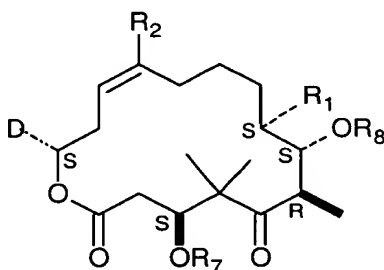
and stereoisomers thereof, wherein D is $\text{R}_9\text{COO}-\text{C}(\text{R})(\text{R}_3)$; R_2 is H or methyl; R_3 is methyl; R_7 and R_8 are each selected from TBS, H, and a protecting group, and wherein R_9 is selected from alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof.

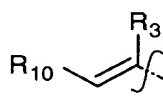
83. (New) A method according to claim 81 wherein said fifth compound is converted to a sixth compound of the formula:



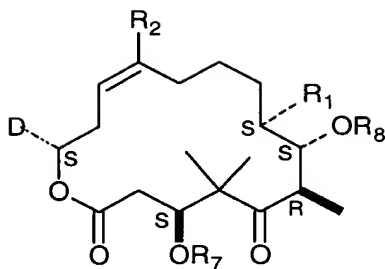
and stereoisomers thereof, wherein D is ; R₂ is H or methyl; R₃ is methyl; and R₇ and R₈ are each selected from TBS, H, and a protecting group.

84. (New) A method according to claim 83 wherein said sixth compound is converted to a seventh compound of the formula:



and stereoisomers thereof, wherein D is ; R₂ is H or methyl; R₃ is methyl; R₇ and R₈ are each selected from TBS, H, and a protecting group; and wherein R₁₀ is selected from alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof.

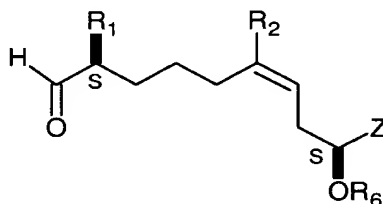
85. (New) A method according to claim 83 wherein said sixth compound is converted to a seventh compound of the formula:



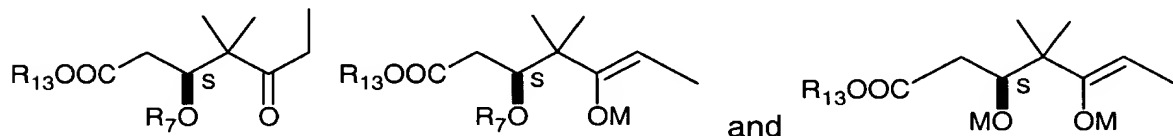
and stereoisomers thereof, wherein D is ; R₂ is H or methyl; R₃ and R₄ are each methyl; and R₇ and R₈ are each selected from TBS, H, and a protecting group.

86. (New) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

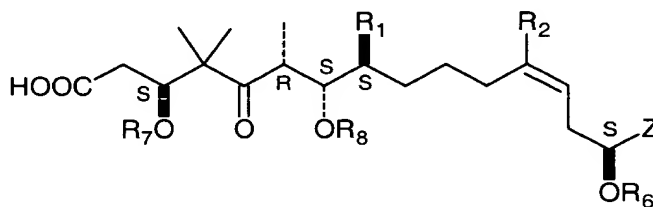
(a) performing an aldol condensation of a first compound of the formula:

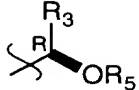


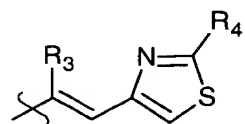
and stereoisomers thereof, with a second compound selected from the formulas:



and stereoisomers thereof, thereby to form a third compound of the formula:

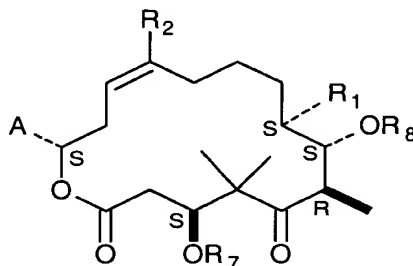


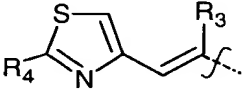
and stereoisomers thereof, wherein Z is selected from  and



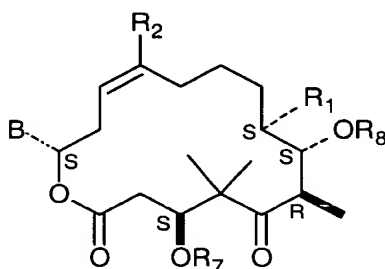
; wherein R_1 , R_2 , R_3 and R_4 are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; wherein R_5 , R_6 , R_7 and R_8 are each selected from H and a protecting group; wherein R_{13} is H or a metal salt; and wherein M is an alkali metal salt or transition metal salt; and

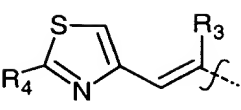
(b) performing a macrolactonization of the third compound thereby to form a fourth compound of the formula:

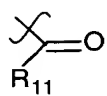


and stereoisomers thereof, wherein A is ; R_2 is H or methyl; R_3 and R_4 are each methyl; and wherein R_7 and R_8 are each H; and

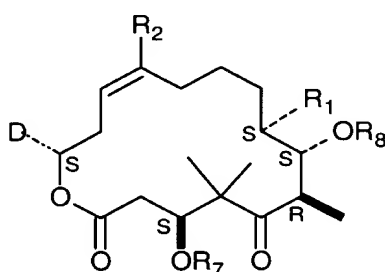
(c) converting said fourth compound to a fifth compound of the formula:

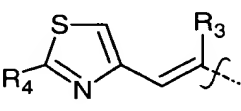


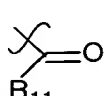
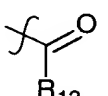
and stereoisomers thereof, wherein B is ; wherein R₂, R₃, and R₄

are each methyl; R₇ is ; R₈ is H; and R₁₁ is selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

87. (New) A method according to claim 86 wherein said fifth compound is further converted to a sixth compound of the formula:

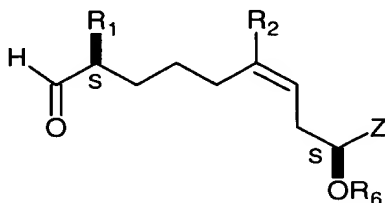


and stereoisomers thereof, wherein D is  , wherein R₂, R₃, and R₄

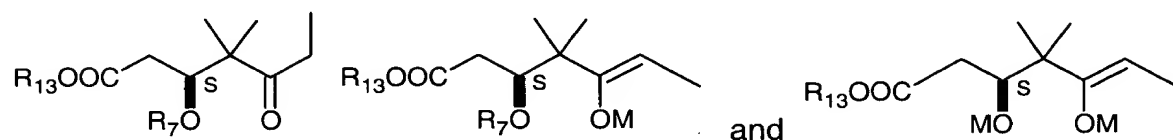
are each methyl; R₇ is , R₈ is , and R₁₁ and R₁₂ are each selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

88. (New) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

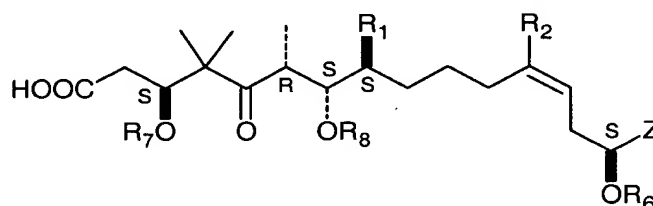
(a) performing an aldol condensation of a first compound of the formula:



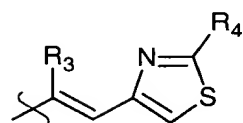
and stereoisomers thereof, with a second compound selected from the formulas:



and stereoisomers thereof, thereby to form a third compound of the formula:

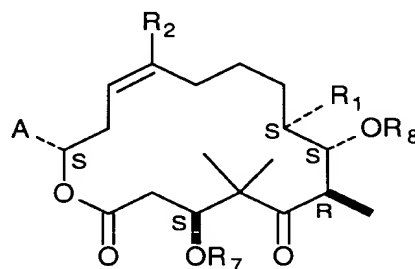


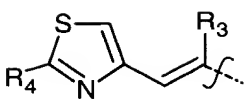
and stereoisomers thereof, wherein Z is selected from and



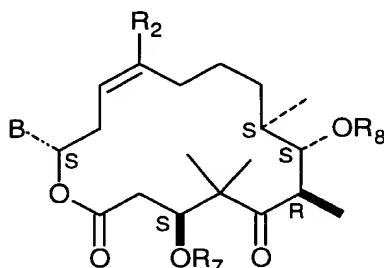
; wherein R_1 , R_2 , R_3 and R_4 are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; wherein R_5 , R_6 , R_7 and R_8 are each selected from H and a protecting group; wherein R_{13} is H or a metal salt; and wherein M is an alkali metal salt or transition metal salt;

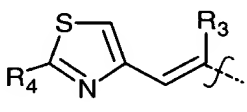
(b) performing a macrolactonization of the third compound thereby to form a fourth compound of the formula:



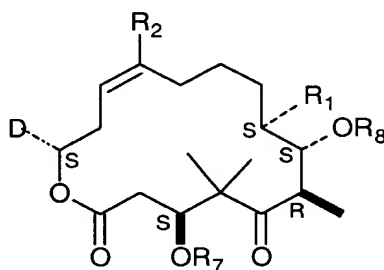
and stereoisomers thereof, wherein A is ; R₂ is H or methyl; R₃ and R₄ are each methyl; and wherein R₇ and R₈ are each H; and

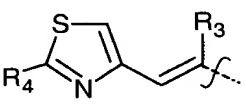
(c) converting said fourth compound to a fifth compound of the formula:




and stereoisomers thereof wherein B is ; wherein R₂, R₃, and R₄ are each methyl; R₇ is TMS; and R₈ is H.

89. (New) A method according to claim 88 wherein said fifth compound is further converted to a sixth compound of the formula:

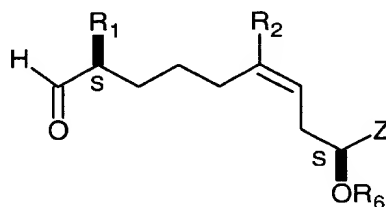


and stereoisomers thereof, wherein D is ; wherein R₂, R₃, and R₄

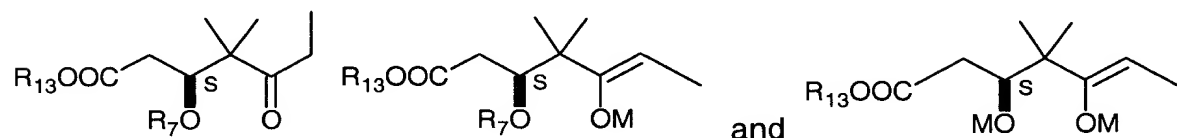
are each methyl; R₇ is H; R₈ is ; and R₁₂ is selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

90. (New) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

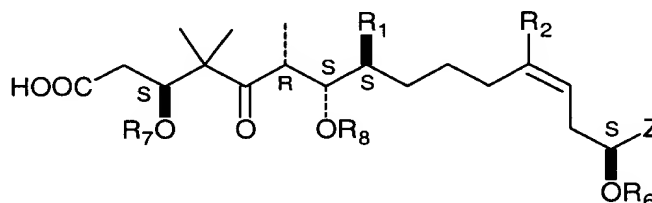
(a) performing an aldol condensation of a first compound of the formula:



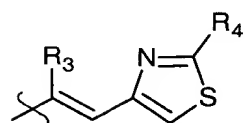
and stereoisomers thereof, with a second compound selected from the formulas:



and stereoisomers thereof, thereby to form a third compound of the formula:

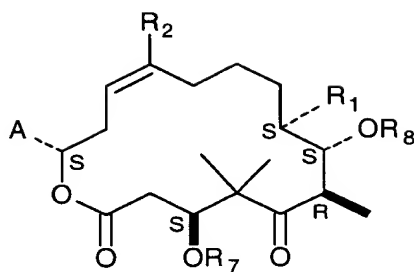


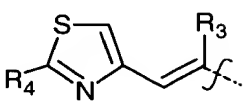
and stereoisomers thereof, wherein Z is selected from and



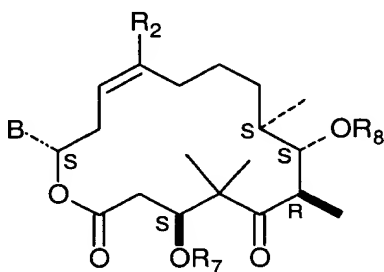
; wherein R₁, R₂, R₃ and R₄ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; wherein R₅, R₆, R₇ and R₈ are each selected from H and a protecting group; wherein R₁₃ is H or a metal salt; and wherein M is an alkali metal salt or transition metal salt; and

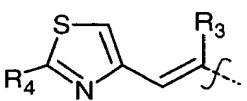
(b) performing a macrolactonization of the third compound thereby to form a fourth compound of the formula:



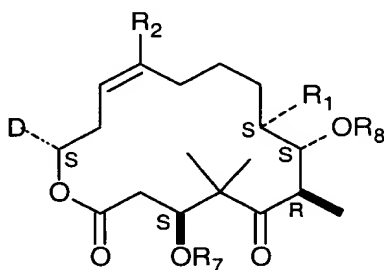
and stereoisomers thereof, wherein A is ; R_2 is H or methyl; R_3 and R_4 are each methyl; and wherein R_7 is TBS and R_8 is TROC.

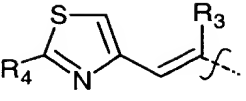
91. (New) A method according to claim 90 wherein said fourth compound is further converted to a fifth compound of the formula:



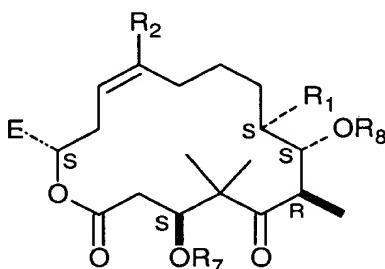
and stereoisomers thereof wherein B is , R_7 is TBS and R_8 is H.

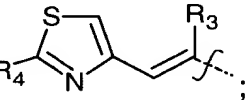
92. (New) A method according to claim 91 wherein said fifth compound is further converted to a sixth compound of the formula:



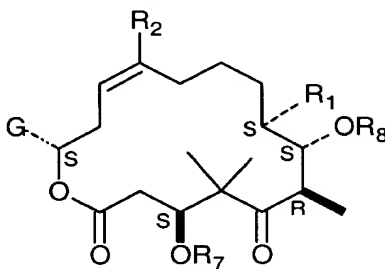
and stereoisomers thereof, wherein D is ; R₇ is TBS; R₈ is COR₁₂; and R₁₂ is selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

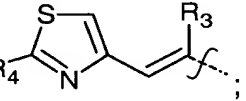
93. (New) A method according to claim 92 wherein said sixth compound is further converted to a seventh compound of the formula:



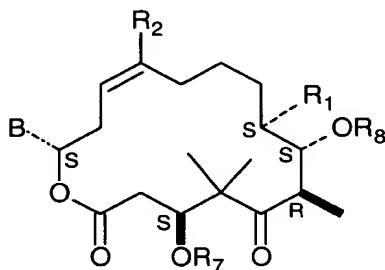
and stereoisomers thereof, wherein E is ; R₇ is H; R₈ is COR₁₂; and R₁₂ is selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

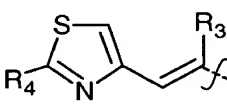
94. (New) A method according to claim 93 wherein said seventh compound is further converted to an eighth compound of the formula:



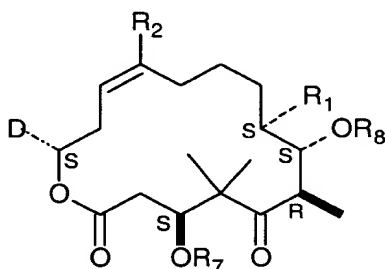
and stereoisomers thereof, wherein G is ; R₇ is COR₁₁; R₈ is COR₁₂; and R₁₁ and R₁₂ are each selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

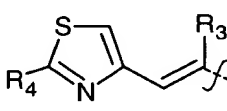
95. (New) A method according to claim 90 wherein said fourth compound is further converted to a fifth compound of the formula:



and stereoisomers thereof wherein B is ; R₇ is H; and R₈ is TROC.

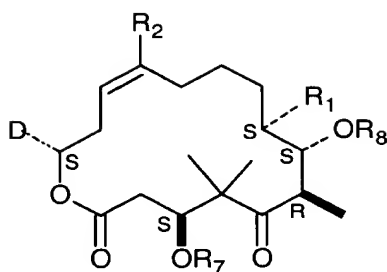
96. (New) A method according to claim 95 wherein said fifth compound is further converted to a sixth compound of the formula:

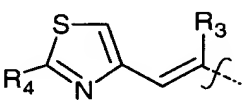


and stereoisomers thereof wherein D is  and R₇ and R₈ are each H.

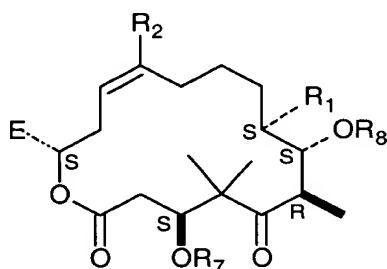
97. (New) A method according to claim 96 wherein said sixth compound is further converted to Epothilone B.

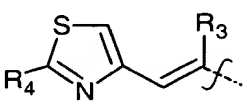
98. (New) A method according to claim 95 wherein said fifth compound is further converted to a sixth compound of the formula:



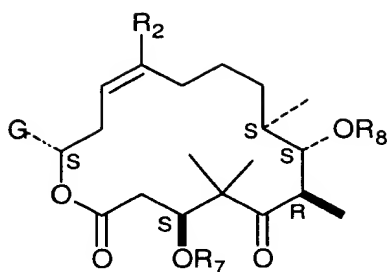
and stereoisomers thereof, wherein D is ; R₇ is COR₁₁; R₈ is TROC; and R₁₁ is selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

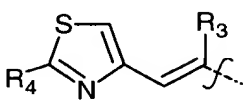
99. (New) A method according to claim 98 wherein said sixth compound is further converted to a seventh compound of the formula:



and stereoisomers thereof, wherein E is ; R₇ is COR₁₁; R₈ is H; and R₁₁ is selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

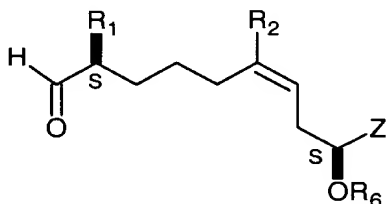
100. (New) A method according to claim 99 wherein said seventh compound is further converted to an eighth compound of the formula:



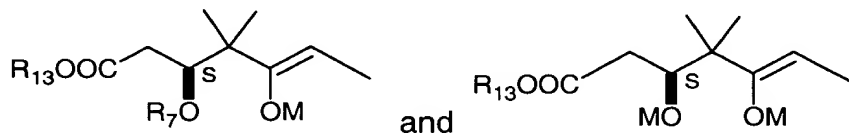
and stereoisomers thereof, wherein G is ; R₇ is COR₁₁; R₈ is COR₁₂; and R₁₁ and R₁₂ are each selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof.

101. (New) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

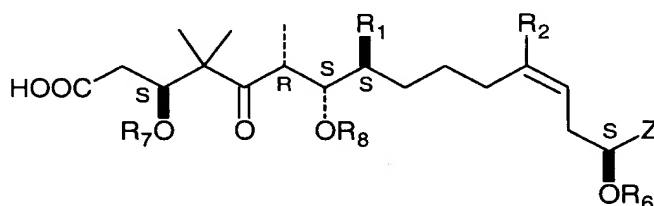
- (a) performing an aldol condensation of a first compound of the formula:

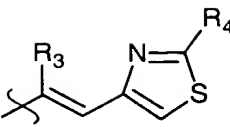


and stereoisomers thereof, with a second compound selected from the formulas:

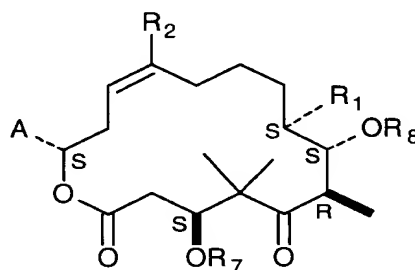


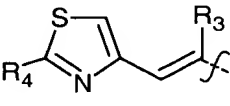
and stereoisomers thereof, thereby to form a third compound of the formula:



and stereoisomers thereof, wherein Z is ; wherein R₁, R₂, R₃ and R₄ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; wherein R₆, R₇ and R₈ are each selected from H and a protecting group; wherein R₁₃ is H or a metal salt; and wherein M is an alkali metal salt or transition metal salt; and

(b) performing a macrolactonization of the third compound thereby to form a fourth compound of the formula:



and stereoisomers thereof, wherein A is ; wherein R₁, R₂, R₃ and R₄ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof; and wherein R₇ and R₈ are each selected from H and a protecting group.

102. (New) A method according to claim 101 wherein R₁, R₃ and R₄ are each methyl, and R₂ is H or methyl.

103. (New) A method according to claim 102 wherein R₂ is methyl.

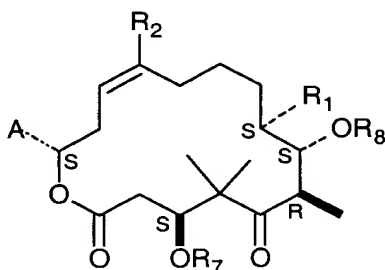
104. (New) A method according to claim 102 wherein at least one of R₆ - R₈ is TBS.

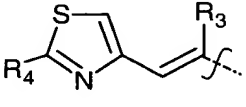
105. (New) A method according to claim 102 wherein R₆, R₇ and R₈ are each TBS.

106. (New) A method according to claim 101 wherein R₆ is selected from H, TBS, TMS, TIPS, PMBM and SEM; wherein R₇ is selected from H, TBS, TROC,

-CO(CH₂)₄CH₃ and -CO(CH₂)₃CH=CH₂; and wherein R₈ is selected from H and TBS.

107. (New) A method according to claim 101 wherein said fourth compound is of the formula:



and stereoisomers thereof, wherein A is ; R₂ is H or methyl; R₇ is H or TBS; and R₈ is H, TBS, or TROC.

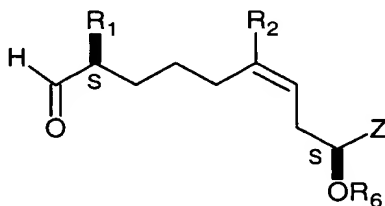
108. (New) A method according to claim 107 wherein said fourth compound is further converted to Epothilone B.

109. (New) A method according to claim 107 wherein R₇ and R₈ each are H.

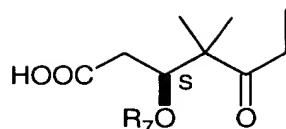
110. (New) A chemical compound formed according to the method of claim 101.

111. (New) A method for use in producing epothilones and analogs and derivatives thereof, comprising:

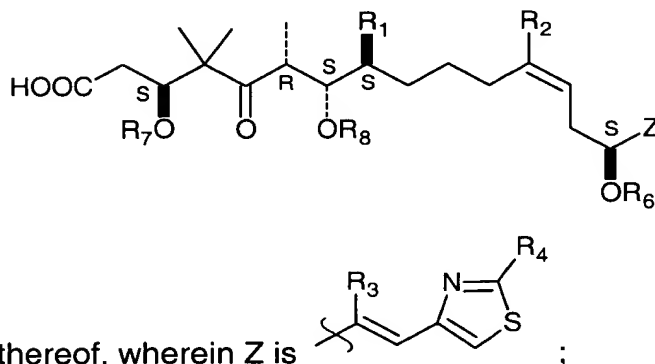
(a) performing an aldol condensation of a first compound of the formula:



and stereoisomers thereof, with a second compound selected from the formulas:



and stereoisomers thereof, thereby to form a third compound of the formula:



and stereoisomers thereof, wherein Z is

wherein

R_1 , R_2 , R_3 and R_4 are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof;

R_6 , R_7 and R_8 are each selected from H and a protecting group;

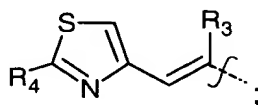
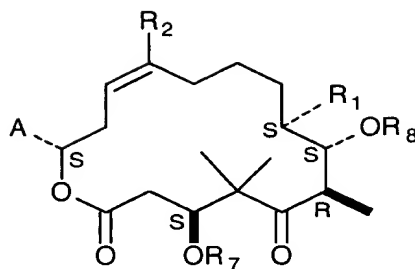
provided that

$R_1 - R_4$ of the first compound are not each methyl when R_6 is the protecting group TBS; and

provided that

$R_1 - R_4$ of the third compound are not each methyl when R_7 is TBS, and R_6 and R_8 are hydrogen or the protecting group TBS;

(b) performing a macrolactonization of the third compound thereby to form a fourth compound of the formula:



and stereoisomers thereof, wherein A is

wherein

R_1 , R_2 , R_3 and R_4 are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof;

R_7 and R_8 are each selected from H and a protecting group;

provided that

$R_1 - R_4$ of the fourth compound are not each methyl when R_7 and R_8 are either H or the protecting group TBS.

112. (New) A method according to claim 111 wherein R_1 , R_3 and R_4 are each methyl, and R_2 is H or methyl.

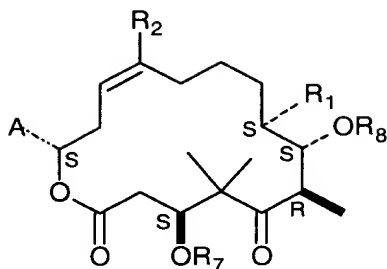
113. (New) A method according to claim 112 wherein R_2 is methyl.

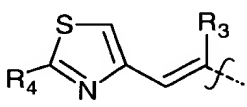
114. (New) A method according to claim 112 wherein at least one of $R_6 - R_8$ is TBS.

115. (New) A method according to claim 112 wherein R_6 , R_7 and R_8 are each TBS.

116. (New) A method according to claim 111 wherein R_6 is selected from H, TBS, TMS, TIPS, PMBM and SEM; wherein R_7 is selected from H, TBS, TROC, -CO(CH₂)₄CH₃ and -CO(CH₂)₃CH=CH₂; and wherein R_8 is selected from H and TBS.

117. (New) A method according to claim 111 wherein said fourth compound is of the formula:



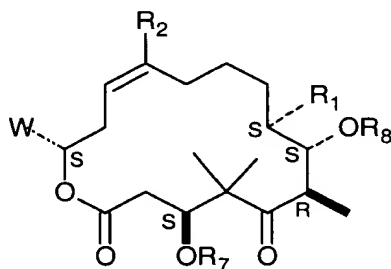
and stereoisomers thereof, wherein A is ; R₂ is H or methyl; R₇ is H or TBS; and R₈ is H, TBS, or TROC.

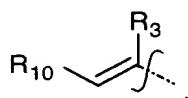
118. (New) A method according to claim 117 wherein said fourth compound is further converted to Epothilone B.

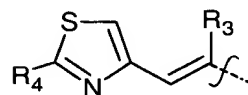
119. (New) A method according to claim 117 wherein R₇ and R₈ each are H.

120. (New) A chemical compound formed according to the method of claim 111.

121. (New) A chemical compound of the formula:



and stereoisomers thereof, wherein W is selected from , and

; and wherein

R₁, R₂, R₃ and R₄ are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof;

R₇ is COR₁₁;

R₈ is selected from H, a protecting group and COR₁₂;

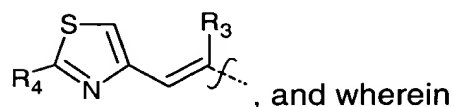
R₁₁ and R₁₂ are each selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof;

122. (New) A chemical compound according to claim 121 wherein at least one of R₁₁ and R₁₂ is selected from -(CH₂)_xCH₃ and -(CH₂)_yCH=CH₂, where x and y are integers.

123. (New) A chemical compound according to claim 122 wherein x and y are selected from the integers 3 and 4.

124. (New) A chemical compound according to claim 122 wherein x is 4 and y is 3.

125. (New) A chemical compound according to claim 121 wherein W is

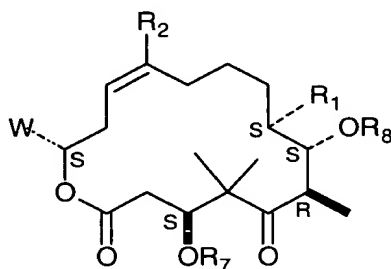


R₂ is H or methyl,

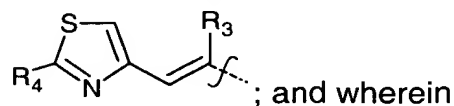
R₈ is H or COR₁₂,

and wherein R₁₁ and R₁₂ are each selected from -(CH₂)₄CH₃ and (CH₂)₃CH=CH₂.

126. (New) A chemical compound of the formula:



and stereoisomers thereof, wherein W is selected from , and



R_1 , R_2 , R_3 and R_4 are each selected from H, alkyl, alkenyl, alkynyl, aryl, cycloalkyl, heterocyclo, and substitutions thereof;

R_7 is selected from H, a protecting group and COR_{11} ;

R_8 is COR_{12} ;

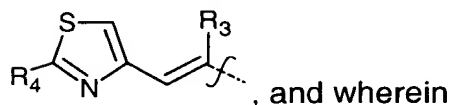
R_{11} and R_{12} are each selected from alkyl, alkenyl, alkynyl, aryl, alkyl-aryl, alkyloxy, aryloxy, cycloalkyl, heterocyclo, amino, sulfo, and substitutions thereof;

127. (New) A chemical compound according to claim 126 wherein at least one of R_{11} and R_{12} is selected from $-(CH_2)_xCH_3$ and $-(CH_2)_yCH=CH_2$, where x and y are integers.

128. (New) A chemical compound according to claim 127 wherein x and y are selected from the integers 3 and 4.

129. (New) A chemical compound according to claim 127 wherein x is 4 and y is 3.

130. (New) A chemical compound according to claim 126 wherein W is



R_2 is H or methyl;

R_7 is H or COR_{11} ; and

R_{11} and R_{12} are each selected from $-(CH_2)_4CH_3$ and $-(CH_2)_3CH=CH_2$.